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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,229	07/21/2004	Christopher K. Haas	57787US006	1499
32692	7590	03/09/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			VO, HAI	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/502,229

Applicant(s)

HAAS ET AL.

Examiner

Hai Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 17-19 and 22-56 is/are pending in the application.
4a) Of the above claim(s) 37-56 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13, 17-19 and 22-36 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0224.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. The 112 claim rejections are considered moot in view of the cancellation of claims 20-21.
2. All of the art rejections are maintained.
3. The provisional obviousness-type double patenting rejections are withdrawn in view of the terminal disclaimer.

Terminal Disclaimer

4. The terminal disclaimer filed on 12/29/2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of copending Application No. 10/502,210 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

5. Claims 17-19 are objected to because of the following informalities: the claims depend from a claim which has been cancelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-13, 17-19, and 22-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of the claim appears to be ambiguous. The claims are not limited as Applicants intended. The thermoplastic film layer is not a required component of the claim. However, the claim further recites an ink receptive layer selected from a group consisting of a

coronal treated thermoplastic film layer and an ink-receptive coating on the surface of a thermoplastic film layer. The ambiguity renders the claims indefinite.

With regard to claims 30, 31, 33 and 34, the open language "comprises" nested inside of the closed language "consisting of" renders the claims indefinite.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1-6, 8-10, 22-24, 26-29, 33 and 36 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 200200982. US 6,468,451 to Perez et al is relied on as an equivalent form of WO 200200982 for convenience. Since a thermoplastic film layer is not required to be a component of the printable substrate, any elements associated with the thermoplastic film layer are excluded from claim 1. That is, the ink-receptive surface selected from the group consisting of corona-treated foam surface, an ink-receptive coating on a surface of said foam layer and an ink-receptive film layer. Perez discloses a fibrillated article suitable as a printing substrate comprising a high-melt strength, oriented polypropylene foam layer (column 2, lines 55-60, column 14, lines 24-25). The orientation is biaxial column 9, lines 23-25). The foam having a cell size of 50 microns or less is stretched up to 50 times total drawn ratio (column 10, lines 24-26). The fibrillated foam is suitable as a backing of the adhesive tape (column 14, lines 66-67). Perez discloses the

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adhesive tape comprising a fibrillated foam backing that has one side coated with a PSA and an opposite side coated with a release coating (column 15, lines 48-52). The release coating that comprises a thermoplastic polymer, a filler and a pigment will read on Applicants' colored thermoplastic film (column 16, lines 10-15). There is no suggesting in the Perez reference that the release coating is oriented. Perez discloses the fibrillated foam backing being treated with corona discharge (column 16, lines 20-25), which reads on Applicant's ink-receptive surface. The oriented foam is subjected to a mechanical fibrillation step to impart a fibrillated surface thereon (column 10, lines 60-65). The mechanical fibrillation uses cutting elements such as needles in contact with the film. Likewise, an aperture would be inherently formed through the film resulting from the mechanical fibrillation. The foam is thus embossed. Additionally, Perez discloses that fibrillating the foam using a mesh pattern support screen, the resulting schistose surface bears a pattern resembling the warp and weft of a textile (column 12, lines 20-25). Likewise, the foam is embossed. Perez does not specifically disclose a security document. However, it has been held that a recitation with respect to the manner in which a claimed printable substrate is intended to be employed does not differentiate the claimed printable substrate from a prior art fibrillated foam satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Accordingly, it is the examiner's position that Perez anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

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10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 11 is rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 200200982. Perez does not specifically disclose the bending stiffness of the substrate. However, it appears that the multilayer substrate of Perez meets all the structural limitations as required by the claims. The multilayer substrate comprises a high melt strength foam layer bonded to a thermoplastic film layer. The foam surface is corona treated. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. Like material has like property. This is in line with In re Spada, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

12. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200200982. Perez teaches the use of fillers in the foam material and the release coating (column 16, lines 10-15). Perez does not specifically disclose the inorganic fillers. The examiner takes Official Notice that it is common and well known to use inorganic additives in the foam material and the release coating motivated by the desire to improve mechanical properties of the foam material and the release coating.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200200982 as applied to claim 10 above, further in view of Mody et al (US 5,605,729). Perez further discloses the fibrillated foam article suitable as a hook and loop fastener. Perez does not specifically disclose the hook and loop fastener comprising two high melt strength oriented polymer foam layers and a thermoplastic film layer disposed therebetween. Mody, however, teaches a loop fastener comprising two foam backing 16 and a loop layer 14 disposed therebetween as shown in figure 1. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the loop fastener having a layer construction as shown in the Mody reference because such is an intended use of the material and Mody provides necessary details to practice the invention of Perez.
14. Claims 17-19, 25, 30-32, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200200982 as applied to claims 1, 10 and 29 above, further in view of Pedginski et al (US 5,807,632). Perez discloses the adhesive tape comprising a fibrillated foam backing that has one side coated with a PSA and an opposite side coated with a release coating (low adhesion backside (LAB) coating) (column 15, lines 48-52). Perez discloses the release coating comprising fluorochemical constituents. Perez does not mention the release coating being an ink-receptive layer. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film made from fluorochemicals grafted to ethylene/vinyl acetate copolymer (column 8, lines 56-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the

fluorochemicals grafted to ethylene/vinyl acetate copolymer to form the extrudable release coating of the adhesive tape because such is an intended use of the material and Pedginski provides necessary details to practice the invention of Perez.

Since the release coating of Perez as modified by Pdeginski is made of the ethylene vinyl acetate copolymer as the ink receptive layer of the present invention, it is the examiner's position that the ink-receptive property would be inherently present. Like material has like property. This is in line with *In re Spada*.

Perez does not specifically disclose the release coating film being oriented. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film being oriented to increase the tensile strength of the film, resulting in a thinner release material layer, thereby giving improved performance and economy (abstract, column 10, lines 63-65 and figure 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an oriented release coating film as taught by Pedginski motivated by the desire to increase the tensile strength of the film, resulting in a thinner release material layer, thereby giving improved performance and economy.

Perez does not specifically disclose the release coating film being corona treated. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film being corona treated to enhance the adhesion (examples 11 and 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a corona treated release coating film as taught by Pedginski motivated by the desire to enhance the adhesion.

Perez discloses the adhesive tape comprising a layer construction as follow: a fibrillated foam backing, an adhesive layer and a release coating film (column 15, lines 48-51). Perez does not specifically disclose the release coating film being a laminate of the release coating and a thermoplastic film layer. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film comprising a release coating and a thermoplastic film layer to increase the strength of the release coating film (column 5, lines 30-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a thermoplastic film layer in combination with the release coating film motivated by the desire to increase the strength of the release coating film.

Response to Arguments

15. The art rejections over Perez have been maintained for the following reasons.

Applicants argue that Perez does not teach an ink-receptive surface as recited in the claims. While it is true that the fibrillated article is purportedly useful as a printing substrate, not the precursor foam substrate, Perez does teach the corona-treated fibrillated foam substrate (column 16, lines 17-24), which reads on Applicants' ink receptive surface.

Applicants further argue that Perez does not teach a multilayered article comprising a foam layer and a thermoplastic film layer. The examiner disagrees. Perez discloses the adhesive tape comprising a fibrillated foam backing that has one side coated with a PSA and an opposite side coated with a release coating (column 15, lines 48-52). The release coating that comprises a thermoplastic polymer, a filler

and a pigment will read on Applicants' colored thermoplastic film (column 16, lines 10-15). Additionally, the adhesive layer is made from a thermoplastic elastomer, a filler and a pigment (column 15, lines 20-35), which could read on Applicants' colored thermoplastic film as well. It appears that Perez meets all the structural limitations as required by the claims. The adhesive tape comprises a foam backing and a thermoplastic release coating wherein the foam backing is corona- treated. Therefore, it is not seen that the bending stiffness could not have been inherently present. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. Like material has like property. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

Applicants argue that Perez does not teach the thermoplastic film layer comprising inorganic particulate additives. Applicants' attention is directed to column 16, lines 10-16. Perez teaches that the release coating includes fillers and pigments. Perez does not mention inorganic fillers or inorganic pigments. The examiner takes Official Notice that it is common and well known to use inorganic additives in the foam material and the release coating motivated by the desire to improve mechanical properties of the release coating. Scholz et al (US 6,074,747) will be relied on as the evidence for showing that the inorganic filler has been used in the release coating to improve mechanical properties of the release coating.

Applicants argue that Mody does not correct the defects of Perez. The examiner disagrees. Perez discloses the fibrillated foam article can be used as hook

and loop fasteners. Perez does not specifically disclose the hook and loop fastener comprising two high melt strength oriented polymer foam layers and a thermoplastic film layer disposed therebetween. Mody, however, teaches a loop fastener comprising two foam backing 16 and a loop layer 14 disposed therebetween as shown in figure 1. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the loop fastener having a layer construction as shown in the Mody reference because such is an intended use of the material and Mody provides necessary details to practice the invention of Perez. Additionally, it is not seen that the fibrillated foam article of Perez could not have been modified with the layer construction as shown in Mody as the two articles are directed to the same applications and serve for the same purposes.

Applicants assert that the combined teachings of Perez and Peginski are without merit because the fluorochemical grafts of Peginski release coating would reduce ink adhesion. The examiner disagrees. The examiner directs Applicants' attention to US 2004/0053044 to Moreno et al which is relied on as the evidence to show that the LAB coating made from fluorochemicals is an ink receptive layer (paragraph 0027). Further, Bries et al (US 6,641,910) also discloses the LAB coating made from low surface energy based polymer is an ink receptive layer (column 5, lines 1-5). Applicants allege that to modify Perez by substituting the release polymers for an adhesive layer would defeat the intent of Perez. The arguments appear to be irrelevant to the basis from which the obviousness is made. The combination of Perez and Pedingski has nothing to do with the replacement of

the adhesive layer of Perez with the release coating of Pedingski, but rather the modification of the release coating by grafting the fluorochemical on the base polymer of ethylene/vinyl acetate copolymer. Perez discloses the adhesive tape comprising a fibrillated foam backing that has one side coated with a PSA and an opposite side coated with a release coating (low adhesion backside (LAB) coating) (column 15, lines 48-52). Perez discloses the release coating comprising fluorochemical constituents. Perez does not mention the release coating being an ink-receptive layer. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film made from fluorochemicals grafted to ethylene/vinyl acetate copolymer (column 8, lines 56-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fluorochemicals grafted to ethylene/vinyl acetate copolymer to form the extrudable release coating of the adhesive tape because such is an intended use of the material and Pedginski provides necessary details to practice the invention of Perez. Since the release coating of Perez as modified by Pdeginski is made of the ethylene vinyl acetate copolymer as the ink receptive layer of the present invention, it is the examiner's position that the LAB coating of Perez would inherently possess ink-receptive property as like material has like property.

Applicants argue that "were one to corona treated the article of Perez, one would still not be in possession of Applicant's claims, as Perez is directed to a fibrillated article prepared from a foam, and use of the foam per se is not taught or suggested". The arguments appear to be flawed and inaccurate. Perez discloses

the fibrillated foam useful as a tape backing of the adhesive tape (column 14, lines 66-67). Perez also discloses the adhesive tape comprising the backing having one surface coated with an adhesive and an opposite surface coated with a release coating (column 15, lines 48-55). Perez does not disclose the release coating being ink-receptive layer or being corona-treated. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film made from fluorochemicals grafted to ethylene/vinyl acetate copolymer (column 8, lines 56-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fluorochemicals grafted to ethylene/vinyl acetate copolymer to form the extrudable release coating of the adhesive tape because such is an intended use of the material and Pedginski provides necessary details to practice the invention of Perez. Since the release coating of Perez as modified by Pedginski is made of the ethylene vinyl acetate copolymer as the ink receptive layer of the present invention, it is the examiner's position that the LAB coating of Perez would inherently possess ink-receptive property as like material has like property. Further, it has been shown in the art that the release coating made from fluorochemicals is an ink receptive layer (see Bries et al (US 6,641,910) and US 2004/0053044).

Perez does not specifically disclose the release coating film being oriented. Pedginski, however, teaches an adhesive tape comprising an extrudable release coating film being oriented to increase the tensile strength of the film, resulting in a thinner release material layer, thereby giving improved performance and economy

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(abstract, column 10, lines 63-65 and figure 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an oriented release coating film as taught by Pedginski motivated by the desire to increase the tensile strength of the film, resulting in a thinner release material layer, thereby giving improved performance and economy.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo

**HAI VO
PRIMARY EXAMINER**